

**OYSTER ECOSYSTEM-BASED FISHERY MANAGEMENT PLAN
FOR THE GREATER PENSACOLA BAY SYSTEM
GPBS STAKEHOLDER WORKING GROUP**

**MEETING V
MAY 19, 2020—8:30 AM CT
VIRTUAL MEETING VIA ZOOM**

If you cannot connect on your computer or other electronic device

Call (646) 876-9923 Meeting ID: 992 2194 6221

**HOST: THE NATURE CONSERVANCY, FLORIDA
FACILITATOR: FACILITATED SOLUTIONS, LLC**

MEETING V OBJECTIVES

- ✓ To Approve Regular Procedural Topics (Agenda and Meeting IV Summary Report)
- ✓ To Review Meeting Schedule and Updated Workplan
- ✓ To Receive Requested Presentations
- ✓ To Review, Clarify, and Refine Objectives and Strategies to Achieve Goals
- ✓ To Review, Clarify, and Refine Draft Performance Measures to Assess Strategies
- ✓ To Identify Needed: Next Steps, Information, Presentations, and Agenda Items for July Meeting

GPBS STAKEHOLDER WORKING GROUP MEETING V AGENDA—MAY 19, 2020

**All Agenda Times are Central Time Zone
All Times Are Approximate and Subject to Change (including Public Comment and Adjournment)**

8:30 AM CT		CALL TO ORDER
1.	8:30	WELCOME, REVIEW OF VIRTUAL MEETING PARTICIPATION GUIDELINES, AND ROLL CALL
2.	8:40	REVIEW AND APPROVAL of Agenda
3.	8:45	APPROVAL OF FACILITATORS’ SUMMARY REPORT (APRIL 9, 2020 MEETING)
4.	8:50	REVIEW OF PROJECT MEETING SCHEDULE AND UPDATED WORKPLAN
5.	9:05	STAKEHOLDER REQUESTED PRESENTATIONS AND BRIEFINGS (15 MINUTES/PRESENTATION) <ul style="list-style-type: none"> • Overview of FDEP Responsibilities in Oyster and Estuarine Management in Florida. Beth Fugate, FDEP • Shell-budget modeling for oyster reef restoration and sustainable fishing. Tom Soniat, University of Louisiana • An Economic Research Agenda for the GPBS. Bill Huth, University of West Florida
10:00 AM CT		BREAK
6.	10:15	A.) A HEALTHY AND PRODUCTIVE OYSTER REEF ECOSYSTEM <ul style="list-style-type: none"> • Refine and Clarify Objectives, as Needed • Identification and Evaluation of Strategies to Achieve Goal • Review and Refine Related Performance Measures to Assess Strategies • Identification of Information Needs

7.	10:45	B.) THE MANAGEMENT AND REGULATION OF THE OYSTER FISHERY AND AQUACULTURE <ul style="list-style-type: none"> • Refine and Clarify Objectives, as Needed • Identification and Evaluation of Strategies to Achieve Goal • Review and Refine Related Performance Measures to Assess Strategies • Identification of Information Needs
11:15 PM CT		BREAK
NOTE: AGENDA ITEMS 8 & 9 WILL BE DISCUSSED AS TIME ALLOWS FOLLOWING A THOROUGH DISCUSSION OF 6 & 7		
8.	11:30	C.) A Thriving Economy Connected to the Greater Pensacola Bay System <ul style="list-style-type: none"> • Refine and Clarify Objectives, as Needed • Identification and Evaluation of Strategies to Achieve Goal • Review and Refine Related Performance Measures to Assess Strategies • Identification of Information Needs
9.	12:00	D.) An Engaged and Informed Public <ul style="list-style-type: none"> • Refine and Clarify Objectives, as Needed • Identification and Evaluation of Strategies to Achieve Goal • Review and Refine Related Performance Measures to Assess Strategies • Identification of Information Needs
10.	12:15	PUBLIC COMMENT
11.	12:25	NEXT STEPS, INFORMATION NEEDS, PRESENTATIONS, AND AGENDA ITEMS FOR THE NEXT MEETING <ul style="list-style-type: none"> • Review of action items and assignments • Identify needed information and presentations for the next meeting • Identify agenda Items for the next meeting • Meeting evaluation
12:30 PM CT		ADJOURN

PROJECT WEBPAGE: <http://www.myescambia.com/oyster-ebfm-plan>

CONTACT: Please contact Andrea Graves if you have individual needs or questions regarding Zoom access. agraves@tnc.org.

MEETING FACILITATION: Meetings are facilitated by Jeff Blair and Robert Jones from Facilitated Solutions, LLC. Information at: <http://facilitatedsolutions.org>.



**GREATER PENSACOLA BAY SYSTEM STAKEHOLDER WORKING GROUP
MEETING VIA WEBINAR-TELECONFERENCE PARTICIPATION PROCESS**

GENERAL

- Please be aware that background noise from participants is picked-up and amplified on the webinar system, especially when using a speaker-phone or your computer without a headset.
- Greater Pensacola Bay System Stakeholder Working Group (Working Group) members, and any other meeting participants should offer their names each time they speak to ensure all participants know who is speaking.
- Members should offer their names when making and seconding motions.
- Working Group members should announce if they have to sign-off before the virtual meeting is complete.
- Acceptability rating exercise results will be tallied by recording members' votes by name in turn.

ATTENDANCE

- Facilitator will conduct roll call of Working Group members and Project Team.
- Once attendance is complete, the agenda will be reviewed and approved by the Working Group.

PARTICIPANT ETIQUETTE

- Please keep your phones on mute if calling in, and mute the microphone icon in the Virtual Meeting Control Panel if you are connected by webinar. The default mode for your microphone is mute and is reflected by a red microphone icon next to your name, to unmute click the red microphone icon and it will turn green when you are unmuted.
- It works best if everyone mutes themselves except when speaking.
- Please don't put your phones on hold.
- Please wait until invited by the Facilitator to speak to avoid confusion.
- Names will be stacked by the Facilitator to ensure order.
- Participants will have ample time to speak on substantive agenda items.

DISCUSSION PROCESS

- Facilitator will introduce discussion item or presenter.
- Presenter will provide overview of issue and recommendation(s) for Working Group action.
- Hold questions until presentation is complete.
- Once presentation is complete, Facilitator will ask if Working Group members have clarifying questions on the issue, create a speaker's list, and call on members in-turn for clarification.
- Facilitator will ask if any Working Group member wishes to discuss the issue or propose alternative options, create a speaker's list, and call on members in-turn for discussion.
- Once clarification and discussion is complete, Facilitator will conduct a rating exercise or test for consensus on the issue as appropriate.

PUBLIC COMMENT

- Facilitator will ask if anyone from the public wishes to comment during the Public Comment agenda item, create a speaker's list, and call on members of the public in-turn for comments.
- Comments will be limited to three minutes per person.
- Members of the public having questions or wanting to provide additional feedback are encouraged to send their questions and comments to Andrea Graves: agraves@tnc.org.

TEST THE ACCURACY OF YOUR PERCEPTIONS

- Be aware of your perceptions in a virtual meeting, test them by clarifying intent with the speaker, and recognize that technology can alter our ability to accurately interpret subtle verbal and non-verbal cues as to intent and meaning.
- Being on a video call requires more focus than a face-to-face meeting.
- Video conversations require us to work harder to process nonverbal cues like facial expressions, the tone and pitch of the voice, and body language; paying more attention to these consumes a lot of energy and can be stressful.
- Research conducted by German academics in 2014 shows that delays on phone or webinars shaped our views of people negatively—even delays of 1.2 seconds made people perceive the responder as less friendly or focused.
- There is dissonance between our minds and bodies causing people to have conflicting feelings resulting from processing communication through technology.

GUIDELINES FOR VIRTUAL MEETING PARTICIPATION

COME PREPARED. Review the agenda, presentations and background documents ahead of time. Schedule at least 15 minutes to prepare for the meeting/webinar – if you don't need it you can have the time back. Do the pre-work. Make notes and be ready with questions.

TEST THE TECHNOLOGY AHEAD OF TIME. Log in the day before to ensure full access to whatever online technology is being used. Check your headset and/or telephone system.

PARTICIPATION—VIDEO AND AUDIO: If you participate using your computer for audio (using a headset to listen and/or speak) do not use the teleconference call in number (it creates interference). You can listen and/or speak using your headset through the VOIP function of your computer. If you use your computer only for the video/visual function (to view presentations) you will need to call in on the teleconference line to listen and/or speak. Participants who wish to view the presentations will need to use their computers to log-in using the meeting URL provided on the meeting agenda whether they participate with VOIP or the teleconference participation option for audio and video functions.

TURN UP EARLY. Put the web address and teleconference details in your calendar and bookmark the web URL. Set the reminder 15 minutes ahead of the call.

REMOVE DISTRACTIONS. Schedule a quiet place to participate from. Clear your desk and computer desktop. Turn off email & instant messaging. Put your cell phone aside. Put a note on your office door. Create an environment that allows you to fully participate without distractions.

TAKE RESPONSIBILITY FOR YOUR OWN PARTICIPATION. Don't plan to do any "catch up" activities during the call. If you catch yourself multi-tasking, close your eyes and listen. Avoid side conversations whether in the room with colleagues or in an online chat space. Keep your phone on "Mute" unless speaking.

BE AWARE OF AIR TIME. Fully participate while allowing others to do the same. Speak your name before making a comment.

FOLLOW CAB'S MEETING PARTICIPATION GUIDELINES. Do not speak without acknowledgement from the facilitator. Speaking out of turn is very disruptive to a virtual meeting.

SUPPORT THE FACILITATOR. Acknowledge questions and pay attention. Use the raise hand function to speak and wait for the facilitator to invite questions and/or comments. The facilitator will create a speakers list at all appropriate times during the meeting. Keep your phone on "Mute" (not "Hold") whenever possible.

GPBS STAKEHOLDER WORKING GROUP MEMBERSHIP AND REPRESENTATION

MEMBER	AFFILIATION
Building/Development	
1. Shelby Johnson	Johnson Construction of Pensacola, Inc.
2. Glen Miley	biome Consulting Group
Business/Real Estate/Economic Development/Tourism	
3. Will Dunaway	Environmental Lawyer
4. Donnie McMahon	Business and Aquaculture
Environmental/Citizen	
5. Christian Wagley	Healthy Gulf
Local Government	
6. Shelley Alexander	Santa Rosa County Environmental Programs
7. Chips Kirschenfeld	Escambia County Natural Resources Management
8. Matt Posner	Pensacola and Perdido Bays Estuary Program
9. Keith Wilkins	Pensacola City Administrator
Recreational Fishing	
10. Chris Phillips	Hot Spot Charters
Seafood Industry	
11. Pasco Gibson	Seafood Industry/Waterman
12. Josh Neese	Aquaculture
13. Pete Nichols	Seafood Industry/Waterman
14. Tommy Pugh	Seafood Dealer
15. Phil Rollo	Seafood Dealer
16. Calvin Sullivan	Oyster Harvester
17. William (Hub) Williamson	Oyster Harvester
State Government	
18. Beth Fugate	FDEP/Aquatic Preserves
19. Kent Smith	FWC Division of Habitat and Species Conservation
20. Mike Norberg	FWC Division of Marine Fisheries Management
21. Portia Sapp	FDACS Division of Aquaculture
22. Paul Thurman	NWFWMD
Tourism	
23. Jack Brown	Visit Pensacola
University/Research	
24. Jane Caffrey	UWF
25. Rick O'Connor	UF/IFAS Escambia County
26. Chris Verlinde	UF/IFAS/Sea Grant Santa Rosa County
PROJECT TEAM AND FACILITATORS	
THE NATURE CONSERVANCY	
Anne Birch	Marine Program Manager, Florida
Bryan DeAngelis	Marine Habitat Scientist, North America
Laura Geselbracht	Sr. Marine Scientist, Florida
Andrea Graves	Marine Projects Coordinator, Florida
FACILITATED SOLUTIONS, LLC	
Jeff Blair	Working Group Facilitator
Robert Jones	Working Group Facilitator

GPBS STAKEHOLDER WORKING GROUP MEETING SCHEDULE AND WORKPLAN		
STANDING UP AND ORGANIZATION OF THE GPBS STAKEHOLDER WORKING GROUP		
Meeting I. Studer Institute	Oct. 9, 2019	Scoping and organizational meeting, review of the assessment report and questionnaire, and review and refinement of overall project purpose, vision and goal framework.
Meeting II. UF/IFAS SRC Extension	Nov. 15, 2019	Introduction to tools (e.g. oyster calculator, etc.) and member requested presentations on oyster ecology and restoration. Review and refinement of vision themes and goal framework.
SCOPING OF GPBS ISSUES, IDENTIFICATION OF PERFORMANCE MEASURES & OPTIONS		
Meeting III. Sanders Beach	Jan. 15, 2020	Presentations on regulatory management roles and framework for oysters, and strategic communications. Review and refinement of vision goals (4) framework continued. Introduction to potential performance measures to evaluate strategies.
Meeting IV. Zoom Platform	April 9, 2020	Presentations on Oyster Habitat Restoration Suitability Model, Pensacola & Perdido Bays Estuary Program (PPBEP) and <u>G</u> ulf of Mexico <u>E</u> cosystem Service Logic Models & <u>S</u> ocio-Economic Indicators-GEMS Project. Review of draft vision theme and objectives, identification of strategies and related performance measures to evaluate strategies.
Meeting V. Zoom Platform	May 19, 2020	Member requested presentations on FDEP Responsibilities in Oyster and Estuarine Management in Florida, An Economic Research Agenda for the GPBS, and Shell Budget Briefing. Review testing acceptability and refinement of strategies in the 4 goal areas, review performance measures for evaluating strategies, and identify potential Plan implementation actions and steps.
Watermen Workshop Zoom Platform	June 2020	Workshop with watermen to review and provide recommendations on progress to date including Plan outline, draft objectives, strategies and potential actions.
BUILDING CONSENSUS ON GPBS OYSTER ECOSYSTEM-BASED FISHERIES MANAGEMENT PLAN		
Meeting VI. Zoom Platform or UF/IFAS SRC Extension	July 22, 2020	Member requested presentations. Review of comments and suggestions from Watermen Workshop. Review testing acceptability and refinement of strategies in the 4 goal areas, review performance measures for evaluating strategies, and identify potential Plan implementation actions and steps.
Update and Presentations to PPBEP	July 2020	Presentations by TNC to the Pensacola & Perdido Bays Estuary Program's Policy Board, and the Technical, Education and Economic Committees on the Plan goals and framework.
Meeting VII. Zoom Platform or Studer Institute	Sept. 16, 2020	Review of comments and suggestions from the PPBEP presentations, test acceptability and refinement of strategies in the 4 goal areas, review performance measures for evaluating strategies, and identify potential plan implementation actions and steps. Review of Draft Plan outline.
Public Workshop I	October 2020	Review and seek input on the GPBS Oyster Ecosystem-Based Fisheries Management Plan outline, and on the goals, objectives, strategies and actions.
FINALIZING CONSENSUS ON GPBS OYSTER ECOSYSTEM-BASED FISHERIES MANAGEMENT PLAN		
Meeting VIII. Zoom Platform or	Nov. 18, 2020	Review of comments and suggestions from the Public Workshop. Initial review, refinement and consensus testing of Draft Plan's 4 goals, objectives, strategies and actions and implementation

UF/IFAS		recommendations.
Update and Presentations to PPBEP	December 2021	Presentations by TNC to the Pensacola & Perdido Bays Estuary Program’s Policy Board, and the Technical, Education and Economic Committees on the Plan’s progress and the Estuary Program’s role in implementing the Plan.
Meeting IX. Zoom Platform or Studer Institute	Jan. 27, 2021	Review and consensus testing of Draft Plan and implementation guidance and agreement on Draft Plan for Public Workshop,
Public Workshop II Escambia & Santa Rosa counties	February 2021	Review and seek input on GPBS Oyster Ecosystem-Based Fisheries Management Plan and implementation guidance.
Meeting X. Zoom Platform or UF/IFAS SRC Extension	March 17, 2021	Review of public comment, refinement and agreement on the GPBS Oyster Ecosystem-Based Fisheries Management Plan and implementation guidance.

PROJECT WEBPAGE URL <http://www.myescambia.com/oyster-ebfm-plan>

PROJECT FACILITATION: Meetings are facilitated, and meeting reports drafted by Jeff Blair and Robert Jones from Facilitated Solutions, LLC. Information at: <http://facilitatedsolutions.org>.



WORKING GROUP GOAL STATEMENT

The goal of the Greater Pensacola Bay System Working Group is to develop a package of consensus recommendations informed by the best available science, data, and stakeholders’ experiences for the management and restoration of the Greater Pensacola Bay System.

The goal of the project is to ensure that the regulation and management of the oyster fishery, and oyster restoration polices are informed by the best available science and shared stakeholder stewardship values.

The process will be designed so that members can evaluate oyster fishery practices and management options and restoration policies in the Greater Pensacola Bay System. The Working Group’s recommendations, in the form of a Greater Pensacola Bay System Oyster Ecosystem-Based Fisheries Management Plan, will be directed to the TNC Project Team, the Pensacola and Perdido Bays Estuary Program, state managers and regulators, and other agencies/entities as appropriate.

THEME A. A HEALTHY AND PRODUCTIVE OYSTER REEF ECOSYSTEM (Ecological)

Vision Theme A: The oyster reef ecosystem is managed in a manner that supports ecosystem services by protecting and enhancing the habitat and resource in a sustainable and productive manner.

Goal: The Greater Pensacola Bay System sustains a healthy and productive oyster reef ecosystem.

Outcome: By 2030, the oyster reef ecosystem within the Greater Pensacola Bay is managed in a sustainable manner providing measurable ecosystem services.

Key Topical Issues: At the November 15, 2019 meeting members brainstormed key topical issues including: Identifiable and achievable targets; Growth; Public understanding and support; Best practices as a framework for recommendations; Link the Plan to the Estuary Program; Model successes from other estuaries and scale up faster; Leverage and support funding for advance wastewater treatment facilities; Geo spatial mapping; Integrate and build on existing management plans; Identify existing and planned projects; Resiliency and adaptive management as guiding principles; and, Clarify and mitigate potential impacts to sustainably managing the PBS.

OBJECTIVES

Oyster Populations

1. Measurements of oyster reef and population conditions (including larval production spat settlement, Spawning Stock Assessment, shell budgets) are defined and quantifiable, with target and threshold levels identified.
2. Oyster recruitment and survivorship occurs in the estuary on an annual basis at a level that sustains oyster harvest and ecosystem services from oyster reefs.
3. Spawning stock biomass and parental standing stock has increased across the ecological gradients (e.g., salinity, dissolved oxygen) appropriate for oyster growth and survival
4. A net positive shell-budget on both fished and non-fished reefs is sustained while oyster reef restoration is underway.

Ecosystem Service

5. Ecosystem services and ecological health indicators are defined and measurable, with identified target and threshold levels.

Substrate

6. Policies and programs are established and implemented that provide the means to return a significant portion of the harvested oyster shell back to the GPBS for substrate needed for larval recruitment to enhance population productivity.
7. Abundant oyster settlement substrate exists across the estuarine ecological gradients, where appropriate for oyster growth and survival.

Future Conditions

8. Climate-ready considerations are incorporated into restoration and management plans for the GPBS to consider changes in management and future environmental conditions, such as freshwater flow (quantity, timing, hydrodynamics), water quality (e.g., salinity and temperature), sea level, and habitat change.
9. Impacts and activities from future climate scenarios affecting the health and restoration of the GPBS ecosystem are considered and addressed to minimize negative effects to the GPBS ecosystem

STRATEGIES

1. Manage oyster populations, using annual stock assessment data combined with comprehensive shell budget models.
2. Develop a spatial map and prioritized list of restoration projects with a variety of objectives.
3. Establish restoration and management targets for functional oyster habitat using 1 – 3 ecological health indicators (e.g., amount of water filtered by oysters, amount of juvenile fish enhancement by reefs).
4. Implement policies and programs to return of shell back to the system to support oyster population and demographic targets and thresholds.
5. Manage silt and sedimentation to the estuary impacting the oyster reef ecosystem.
6. Design and implement local community incentive initiatives for growing oysters for the ecosystem services (i.e., Mobile Bay oyster gardening).
7. Utilize models and other relevant information on climate change impacts to influence sustainable reef management.
8. Allocate sufficient funding for habitat restoration based on the oyster restoration suitability model.

PERFORMANCE MEASURES (Related Performance Measures to Evaluate Strategies)

- A. Shell budget model indicators.
- B. Area of settlement substrate in the estuary (possibly with goals defined for each 'management objective' – fishing, water filtration, fish production).
- C. Larval abundance in the water column or on standardized settlement substrates.
- D. Density of live oysters, and density of dead oysters (number per m²).
- E. Total oyster biomass (by reef and/or by reefs with different management objectives).
- F. Biomass of spawning stock (> 3 inches or 75 mm) and biomass of very-large spawning stock (> 5 inches or 127 mm).

- G. Reef-enhanced species (or selected species) are increasing in abundance.
- H. Seagrass area is expanding within the estuary.
- I. Number of reef-enhanced species (Oyster Calculator, and FWC's fishery-independent monitoring program).
- J. Water quality improvement data (i.e., clarity, filtration by oysters, total suspended solids).

THEME B. THE MANAGEMENT AND REGULATION OF THE OYSTER FISHERY AND AQUACULTURE INDUSTRY (Wild Harvest and Aquaculture)

Vision Theme B: The management, regulation, restoration and enhancement of the oyster fishery and aquaculture industry is conducted by working collaboratively with stakeholders to create a plan that ensures that protection of the fishery and habitat is monitored and implemented in a manner that is supported by science, data, and field and industry experience and observation, and provides fair and equitable access to the oyster resource.

Goal: A productive, and sustainably managed and regulated oyster reef fishery and ecosystem and aquaculture industry in the Greater Pensacola Bay System.

Outcome: By 2030, oyster reefs in the Greater Pensacola Bay System support a sustainably managed and productive fishery and an aquaculture industry and supported by stakeholders, using the best available science and monitoring to manage and regulate fishery and aquaculture activities in a fair and equitable manner.

Key Topical Issues:

Ongoing funding for management; Ecological restoration principles; Fish and oyster production objectives; Adapt for future changes and circumstances; Incorporate state vetted plans; Address enforcement of regulation; Manage wild harvest differently than aquaculture; Regulation of aquaculture; define fair and equitable; and, Consider providing access to the fishery through changes in licensing requirements, building in a preference for locals or specific user types.

OBJECTIVES

1. Establish and follow a biological threshold for harvest that provides for a sustainable commercial and recreational wild oyster fishery.
2. Growth and expansion of the oyster aquaculture industry in the GPSBS uses best management practices that has broad support of the industry and community and enables economic opportunities, while maximizing beneficial services of aquaculture, and preventing negative effects to the GPBS and its users.
3. Sustainable production thresholds and targets for wild harvest and aquaculture, respectively, are considered adaptable and re-assessed on a periodic basis to account for changes in climate and other future environmental conditions.

STRATEGIES

1. Estuary-specific oyster population and demographic targets are developed, using routine monitoring data combined with shell budget models.
2. Enhance the monitoring and accuracy of commercial and recreational oyster harvest data collection and reporting methods through co-management of the resource by agencies and watermen.
3. Enhance the monitoring and accuracy of aquaculture stock and harvest data collection for inclusion in sustainability targets.
4. Management of oyster resources are enforced through co-management oversight by agencies and watermen
5. Allocate sufficient funding for restoration of harvested reefs and aquaculture farms based on the oyster restoration suitability model.
6. Traditional and novel policies and programs are implemented to support return of shell back to the system to support oyster population and demographic targets and thresholds.
7. Institute additional management strategies that support the current industry members (e.g., rotational harvest, Territorial Use Rights of Fishing, limited entry, regulations)
8. Create a public/private program to cooperatively manage specific harvested reefs.
9. Review and revise state management agency regulations and management goals in consultation with oyster resource stakeholders to ensure they are clear and enforceable and include a working feedback loop with the regulated public to refine the program and enhance compliance.
10. Develop aquaculture growth strategies and Spatial Area Management Plans that define the growth potential for aquaculture in the system.
11. Develop "future oyster farmers" program that helps locals in the area learn about aquaculture and the potential for making a living growing oysters in the system.

PERFORMANCE MEASURES (Related Performance Measures to Evaluate Strategies)

- A. Total harvest in bushels.
- B. Harvest by size category.
- C. Harvest by location.
- D. Harvest by fishery type (recreational/commercial).
- E. Timing of harvest during the fishing season.
- F. Harvest per licensed harvester.
- G. Effort expended harvesting.
- H. Catch per unit effort (catch per trip).
- I. Amount of illegal harvest.
- J. Number of full-time harvesters that the fishery can support.
- K. Percent of live oysters harvested.
- L. Biomass of oysters (> 3 inches?) on fishable reefs.
- M. Number and size of aquaculture leases.

THEME C. A THRIVING ECONOMY CONNECTED TO THE GREATER PENSACOLA BAY SYSTEM (Thriving Economy)

Vision Theme C: The Greater Pensacola Bay System oyster fishery, aquaculture, and oyster reef ecosystem serve as key components of the region’s cultural heritage and economic viability and serve to sustain an economically viable and thriving fishery, recreation and tourism industry.

Goal: A healthy Bay System contributes measurably to a thriving economy for the Greater Pensacola Bay region.

Outcome: By 2030, recovery of the Greater Pensacola Bay ecosystem spurred by restoration of oyster reef ecosystems and a sustainable oyster fishery and development of aquaculture has led to a thriving economy that provides opportunities for sustainable and responsible industry, development, business, recreation and tourism.

Key Topical Issues:

Growth and conflicts among users; Aquaculture regulation and user conflicts; Aquaculture Use Zones; Economic activities that rely on a healthy bay; Social science; Controlling runoff; Public pushback for living seashore projects; Revenue generation and the plan; Local government involvement; Access opportunities to the water; Maintaining working waterfronts; and, Promotion and branding of aquaculture and oysters and the health of the Bay.

OBJECTIVES

1. Develop a Marketing Strategy to promote wild harvest and cultured oysters and the ecosystem services provided by improved oyster populations in the GPBS.
2. Oyster reefs, oyster fishing and oyster aquaculture are recognized as key components of the local economy and Panhandle region, including supporting diverse and healthy fisheries, ecotourism, and other recreational activities.
3. Economic indicators of the commercial oyster fishery, aquaculture industry and associated industries in the GPBS demonstrate increasing viability and growth over X years.
4. Key water quality management investments are being made with the goal of protecting and enabling the oyster fishery and oyster aquaculture industry (including land use impacts).
5. The wild harvest fishery and oyster aquaculture industries provide economic and career growth opportunities.
6. Industries, and businesses within the GPBS are supportive and compatible with a healthy and well-managed GPBS ecosystem.
7. Growth management policies, plans and regulations affecting the GPBS are compatible with a healthy and well-managed ecosystem while maintaining a thriving economy and supporting cultural heritage.

STRATEGIES

1. Monitor key economic indicators for changes over time based on restoration efforts to the System.
2. Develop business plans for the industry that reflect trends for consumer interest in local products.
3. Growth Management. Work with local governments to align growth management policies and practices with awareness and support for oyster restoration success from land impacts.
4. Build an oyster aquaculture-brand for the GPBS that emphasizes clean water and local connection.

PERFORMANCE MEASURES (Related Performance Measures to Evaluate Strategies)

- A. Value of harvest that meets an economic minimum for sustainability for waterman.
- B. Cost/value per bags.
- C. Number of fishermen participating in the fishery.
- D. Number of aquaculturists.
- E. Total aquaculture production and revenue.
- F. Revenue per harvester (and perhaps its distribution).
- G. Travel time costs, and distance travelled.
- H. Cost of management measures (e.g., restoration efforts).
- I. Percent of local oysters in the market.
- J. Revenue per harvester (and perhaps its distribution).
- K. Revenue raised in fees/bushel taxes.
- L. Restoration costs avoided.
- M. Social benefits (value of ecosystem benefits).
- N. Performance metric for economic sustainability of the community.
- O. Cost-Benefit Analysis (total economic investment versus outcome to economy).
- P. Area of prohibited (or open) waters.
- Q. Number of days of emergency closures.
- R. Water quality data.
- S. Economic measures (number of fishers, aquaculturists, days fishing).
- T. Commercial and recreational catch, as well as aquaculture production (bags per day, total annual catch).
- U. Estimated filtration at estuarine scale (Oyster Calculator).
- V. Percentage of "residence time filtration" (Oyster Calculator).
- W. Estimated enhancement of reef-enhanced species (Oyster Calculator, along with FWC's fishery-independent monitoring program data).
- X. Turbidity/Water clarity (reduction in suspended matter).
- Y. Nitrogen reduction (sequestration, burial and/or denitrification).
- Z. Value of nitrogen reduction (\$ in dollars).
- AA. Percent Removal of Nitrogen.
- BB. Filtration of estuary volume by oysters (wild and aquaculture stock) occurs within estuary residence time (27 days).

Theme D: An Engaged and Informed Public and Decision-Makers (Public Education Communication)

Vision Theme D: Stakeholders of the Greater Pensacola Bay System are committed to working together collaboratively to serve as a hub for best practices and research, and provide education and communication on the importance of maintaining the health and productivity of the oyster reef ecosystem, fishery, and aquaculture, and the role they play in ensuring a thriving community.

Goal: The oyster reef ecosystem of the Greater Pensacola Bay System is supported and protected by an engaged and informed public, and decision-makers.

Outcome: By 2030, the Greater Pensacola Bay System, stakeholders, private and nonprofit civic leaders, the public, and decision-makers are informed of the importance of sustaining the health of the Bay System, and work actively together along with elected and appointed leaders and managers to invest in and implement the Plan.

Key Topical Issues:

A communication strategy to bring the PBS back to health; Marine habitats- out of sight out of mind; Plan should fit into the Estuary CCMP; Local government support; Unique community/state partnership; Distrust of science; and, Lack of information and measures on benefits to the community for a restored system.

OBJECTIVES

1. Establish a coordinated outreach and education plan to increase public awareness and support for a healthy and well-managed GPBS ecosystem.
2. Businesses, industries, non-profits, and local governments are supportive and included in outreach and education efforts to generate and increase public awareness and support for a healthy and well-managed GPBS ecosystem.
3. Funding resources are identified and utilized to generate awareness, education, and support for a healthy oyster and GPBS ecosystem.
4. The new estuary program incorporates and promotes the recommendations of the new oyster plan.

STRATEGIES

1. Develop volunteer public- citizen science programs for monitoring, data collection, and restoration efforts for oyster reef restoration projects.
2. Enlist advocacy group to help improve conditions in the GBPS.
3. In education efforts address both positive and negative consequences of restored (including shell recovery programs) and depleted/lost oyster reef habitat respectively.
4. Demonstrate the benefits of shell recycling programs, and the negative aspects of not recycling the shell back into the System.

5. Demonstrate the economic and social benefits derived from the ecosystem services provided by oyster fisheries and restored/natural reef habitat.
6. Develop economic metrics and public engagement and education programs.

PERFORMANCE MEASURES (Related Performance Measures to Evaluate Strategies)

- A. Amount of funding for Plan implementation.
- B. Number times plan is referenced in growth management plans.
- C. Number of people with improved understanding of the issues important to health and restoration of the GPBS.
- D. Number of businesses, industries, non-profits, and local governments participating in outreach efforts.
- E. Percent funding of available in relation to funding needed to implement the Plan.
- F. Amount of local, state, federal (and RESTORE) funds allocated for management and restoration actions in Pensacola Bay.
- G. The extent to which the new Pensacola and Perdido Bay Estuary Program implements recommendations in the new Plan.
- H. Number of volunteers participating in oyster reef restoration efforts.

GPBS PROJECT SUMMARY AND STATEMENT OF PURPOSE

PROJECT SUMMARY. The Nature Conservancy (TNC) in Florida is convening stakeholders to develop an oyster ecosystem-based fisheries management plan for the Greater Pensacola Bay System (GPBS). For the purpose of this initiative the system is defined as Escambia, Pensacola, East and Blackwater Bays in Escambia and Santa Rosa Counties. TNC has been supporting and implementing projects in the GPBS for the past several years in collaboration with partners. Oysters and the once vibrant fishery are disappearing from the System. Significant funding as a result of the Deepwater Horizon oil spill is being dedicated to restoration of oysters throughout the Gulf of Mexico. This is a once-in-a-lifetime opportunity to reverse the trend and create a robust future for oysters and the fishery in Florida and the Gulf.

STATEMENT OF PURPOSE. The goal of the initiative is that by 2022 an oyster ecosystem-based fisheries management plan (Plan) for the GPBS is approved by the stakeholders. The Plan will be offered as a model for management of oyster resources throughout Florida's estuarine systems, the Gulf of Mexico and other regions. The intent is for the Plan to be developed, owned and implemented by the community and the State, not a "TNC plan".

The Working Group and the resulting Plan will seek to address and determine the priority of multiple objectives including wild harvest, oyster aquaculture, ecosystem service outcomes (i.e., clear water, more crabs and fish, nitrogen removal), and social benefits (e.g., recreational angling opportunities, and opportunity to participate in defining credible management processes) for the GPBS.

The Plan resulting from this initiative will help to define long-term estuary-scale goals for restoring and sustaining oysters in the estuary. It will work in the broader context of the Pensacola and Perdido Bays Estuary Program that received EPA funding in 2018 as part of the Deepwater Horizon oil spill settlement. The program hired an executive director in 2019 and is organizing to develop a Comprehensive Conservation and Management Plan (CCMP) for the Estuary Program's planning region.

WORKING GROUP GUIDING PRINCIPLES

WORKING GROUP DRAFT GUIDING PRINCIPLES

- 1.) Working Group members will strive to work together collaboratively and seek to understand and respect differing perspectives.
- 2.) The Working Group will strive to achieve consensus on the evaluation and development of recommendations submitted to the TNC Project Team and appropriate management and regulatory agencies.
- 3.) The Working Group will operate under policies and procedures that are clear, concise, and consistently and equitably applied.
- 4.) Working Group members will serve as accessible liaisons between the stakeholder groups they have been appointed to represent and the GPBS Working Group and should strive to both inform and seek input on issues the Working Group is addressing from those they represent.

WORKING GROUP CONSENSUS-BUILDING PROCEDURES

The GPBS Stakeholder Working Group (Working Group) will seek consensus on its recommendations for options to be evaluated using the best available science and decision-support tools for management and restoration of the GPBS. General consensus is a participatory process whereby, on matters of substance, the members strive for agreements which all of the members can accept, support, live with or agree not to oppose. In instances where, after vigorously exploring possible ways to enhance the members' support for the final package of recommendations, and the Working Group finds that 100% acceptance or support is not achievable, final consensus recommendations will require at least 75% favorable vote of all members present and voting. This super majority decision rule underscores the importance of actively developing consensus throughout the process on substantive issues with the participation of all members and which all can live with. In instances where the Working Group finds that even 75% acceptance or support is not achievable, publication of recommendations will include documentation of the differences and the options that were considered for which there is more than 50% support from the Working Group. The report that will be a product of the Working Group process will clearly describe the level of agreement between Working Group members on each specific recommendation as well as on the suite of recommendations as a whole.

Working Group members, staff, and facilitators will be the only participants seated at the table. Only Working Group members may participate in discussions and vote on proposals and recommendations. The facilitators, or a Working Group member through the facilitators, may request specific clarification from a member of the public in order to assist the Working Group

in understanding an issue. Observers/members of the public are welcome to speak during the public comment period provided at each meeting, and all comments submitted on the public comment forms provided will be included in the facilitators’ summary reports. In order to provide balance to the Working Group process, members agree to represent and consult with their stakeholder interest groups.

ACCEPTABILITY RATING SCALE FOR OPTIONS AND RECOMMENDATIONS

During an early meeting, Working Group members will be asked to propose an initial suite of options to address each of the Key Topical Issues in turn. During subsequent meetings Working Group members will be asked to review existing proposed options and will be invited to propose any additional options for Working Group consideration, and subsequently to rate the options for acceptability. In addition, following discussion and refinement of options, members may be asked to do additional ratings of proposed options if requested by a Working Group member or project scientist. Members should be prepared to offer specific refinements to address their reservations.

Once rated for acceptability, options with a 75% or greater number of 4s and 3s in proportion to 2s and 1s will be considered preliminary consensus recommendations for inclusion in the final package of recommendations.

At any point during the process, any option may be re-evaluated and rated at the request of any Working Group member. The status of a rated option will not be final until the final Working Group meeting, when a vote will be taken on the entire package of consensus ranked recommendations.

The following scale will be utilized for acceptability rating exercises:

Acceptability Rating Scale	4 = Acceptable, I agree	3 = Acceptable, I agree with <i>minor reservations</i>	2 = Not Acceptable, I don’t agree unless <i>major reservations</i> are addressed	1 = Not Acceptable
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TERMS AND DEFINITIONS

GUIDING PRINCIPLES: The Working Group’s Guiding Principles reflect the broad values and philosophy that guides the operation of the Working Group and the behavior of its members throughout its process and in all circumstances regardless of changes in its goals, strategies or membership.

VISION: An idealized view of where or what the stakeholders would like the oyster resource and ecosystem to be in the future.

VISION THEMES: The related key topical issue area strategies that characterize the desirable future for the oyster resource and ecosystem. The Vision Themes establish a framework for goals and objectives. They are not ordered by priority.

GOAL: A goal is a statement of the project’s purpose to move towards the vision expressed in fairly broad language.

OUTCOME: Outcomes describe the expected result at the end of the project period – what is hoped to be achieved when the goal is accomplished (*e.g., an ecologically, and economically viable, healthy and sustainable Greater Pensacola Bay System oyster fishery and ecosystem*).

OBJECTIVE: Objectives describe in concrete terms how to accomplish the goal to achieve the vision within a specific timeframe and with available resources. (*e.g., By 2023, the State of Florida has approved a stakeholder developed oyster ecosystem-based fishery management plan for the Greater Pensacola Bay System.*)

STRATEGY: A method, action, plan of action, or policy that can be tested to determine whether it solves a problem and helps to achieve objectives and goals in the context of bringing about a desired future for the Greater Pensacola Bay System.

PERFORMANCE MEASURES: The regular measurement of outcomes and results that generates reliable data on the effectiveness and efficiency of programs and plans. Performance measure will be used to measure the results of proposed management and restoration options.

STAKEHOLDERS: All interest groups whether public, private or non-governmental organizations who have an interest or concern in the success of a project and can affect or be affected by the outcome of any decision or activity of the project. For purposes of the Greater Pensacola Bay System Working Group process, stakeholders include but are not limited to: agriculture, silviculture, business, real estate, economic development, tourism, environmental, citizen groups, recreational fishing, commercial seafood industry, local government, state government, federal government, universities, and research interests.